



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/533,958

05/04/2005

Khaledul M Islam

PAT 58223W-2

8096

26123

7590

10/05/2006

BORDEN LADNER GERVAIS LLP
WORLD EXCHANGE PLAZA
100 QUEEN STREET SUITE 1100
OTTAWA, ON K1P 1J9
CANADA

EXAMINER

LY, NGHI H

ART UNIT

PAPER NUMBER

2617

DATE MAILED: 10/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/533,958

Applicant(s)

ISLAM ET AL.

Examiner

Nghi H. Ly

Art Unit

2617

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 July 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 27,28 and 32-59 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 27,28 and 32-59 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

Art Unit: 2617

1. The Art Unit location of your application in the USPTO has changed. To aid in correlating any papers for this application, all further correspondence regarding this application should be directed to Art Unit 2617.

DETAILED ACTION

Response to Arguments

2. Applicant's arguments with respect to claims 27, 28 and 32-59 have been considered but are moot in view of the new ground(s) of rejection.

Regarding claims 27, 28 and 32-59, the allowance as indicated in the previous Office action has been withdrawn.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 27, 28, 32-34 and 59 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

a. Regarding claim 27, the newly added limitation recites "if". However, the objected claim 31 recites "when". Therefore, claim 27 does not include all of the limitations of the base claim and any intervening claims (see *Allowable Subject Matter* below).

b. Regarding claim 59, it is not clear to the examiner which claim that claim 59 depends on, since claim 59 can not depend on "claim 23 claim 56".

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 35-41, 44 and 52-59 are rejected under 35 U.S.C. 102(b) as being anticipated by Abreu et al (US 5,754,956).

Regarding claim 35, Abreu teaches a method for saving battery power in a mobile device switched to a deep sleep mode (see column 4, line 57 to column 5, line 5), the method comprising:

- a) monitoring a system channel (see column 8, lines 31-47),
- b) counting a number of times the system channel is lost within a timeout period (see column 9, lines 26-58),
- c) entering the deep sleep mode when the system channel count equals a predetermined number (also see column 8, lines 31-47, see “then the handset 120 enters a sleep mode for a given time period”),
- d) waking up from the deep sleep mode after a time interval to sample an RF strength of a system (also see column 8, lines 31-47, see “When the sleep time ends, the handset 120 will again scan...”),
- e) comparing the sampled RF condition strength to a predetermined level (also see column 8, lines 31-47, see “predetermined threshold”),

f) increasing the time interval if the sampled RF condition strength is less than the predetermined level (also see column 8, lines 31-47, see "After repeated unsuccessful scans, the sleep time will change to a longer duration". In this case, Abreu's "unsuccessful scans" reads on Applicant's "the sampled RF condition strength is less than the predetermined level", since "unsuccessful scans" based on "signal strength of suitable base station" as indicated in column 8, lines 3-4), and,

g) re-entering the deep sleep mode (also see column 8, lines 31-47).

Regarding claim 36, Abreu teaches the step of re-entering the deep sleep mode includes switching the mobile device to one of a first, second and third level deep sleep modes (see column 8, lines 31-47).

Regarding claim 37, Abreu teaches switching includes setting a maximum loop counter value to a predetermined counter value associated with one of the first, second and third level deep sleep modes (see column 11, lines 15-20 and column 11, lines 45-50).

Regarding claim 38, Abreu teaches the step of switching includes setting the time interval to a predetermined time value associated with one of the first, second and third level deep sleep modes (see column 8, lines 31-47, see "a sleep mode for a given time period").

Regarding claim 39, Abreu teaches the predetermined time value associated with the second level deep sleep mode is greater than the predetermined time value associated with the first level deep sleep mode (see column 8, lines 31-47, see "the sleep time will change to a longer duration").

Regarding claim 40, Abreu teaches the predetermined time value associated with the third level deep sleep mode is greater than the predetermined time value associated with the second level deep sleep mode (see column 8, lines 31-47, see “the sleep time will change to a longer duration”).

Regarding claim 41, Abreu teaches the step of waking includes determining a system for acquisition from a list of systems associated with one of the first, second and third level deep sleep modes (see column 8, lines 31-47).

Regarding claim 44, Aabreu teaches the step of comparing includes comparing the signal to noise ratio of the RF condition to a predetermined value (see column 3, lines 35-38).

Regarding claim 52, Abreu teaches the step of switching includes setting a maximum timeout period to a predetermined timeout value associated with one of the first, second and third level deep sleep modes (see column 8, lines 31-47).

Regarding claim 53, Abreu teaches comparing includes switching the mobile device to one of the second and third level deep sleep modes when the maximum timeout period expires (see column 8, lines 31-47).

Regarding claim 54, Abreu teaches the step of switching the mobile device to one of the second and third level deep sleep modes includes switching the mobile device to the second level sleep mode when the mobile device is in the first level deep sleep mode (see column 8, lines 31-47).

Regarding claim 55, Abreu teaches the step of switching the mobile device to one of the second and third level deep sleep modes includes switching the mobile

Art Unit: 2617

device to the third level deep sleep mode when the mobile device is in the second level deep sleep mode (see column 8, lines 31-47).

Regarding claim 56, Aabreu teaches a mobile device battery power saving system (see column 4, line 57 to column 5, line 5),

a) a channel processor for providing a flag signal indicating loss of a system channel (see fig.2, processor 128 and see column 8, lines 31-47),

b) a deep sleep controller for receiving the flag signal (see column 9, lines 26-58 and column 11, lines 16-21), counting a number of times the system channel is lost within a timeout period (see column 8, lines 31-47), and providing a system lost exit flag for entering a deep sleep mode when the system channel count equals a predetermined number (see column 8, lines 31-47 and column 9, lines 26-58),

c) a variable setting controller for setting deep sleep mode variables in response to the system lost exit flag and for adjusting the deep sleep mode variables in response to control signals (see fig.2, processor 128 and see column 8, lines 31-47), and,

d) a low power controller for iteratively sampling an RF condition parameter at a time interval defined by the deep sleep mode variables and for providing the control signals to the variable setting controller when the RF condition fails to improve (see column 8, lines 31-47 and Abstract, see "control signal").

Regarding claim 57, Aabreu teaches the system channel includes one of a pilot channel and a paging channel (see Abstract, see "control channel").

Art Unit: 2617

Regarding claim 58, Aabreu teaches the deep sleep mode variables include a timer value for setting the time interval and a loop count value for setting a number of iterations (see column 8, lines 31-47 and see column 9, lines 26-58).

Regarding claim 59, Aabreu teaches the RF condition parameter includes a signal to noise strength ratio (see column 3, lines 35-38).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claims 42 and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aabreu et al (US 5,754,956) in view of Sklovsky (US 2004/0041538A1).

Regarding claim 42, Abreu teaches claims 37 and 41. Abreu does not specifically disclose the list of systems includes a first system list, a second system list and a third system list associated with the first, second and third level sleep modes respectively.

Sklovsky teaches the list of systems includes a first system list, a second system list and a third system list associated with the first, second and third level sleep modes respectively (see [0029]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Sklovsky into the system of Abreu in order to prevent problem that can occur when power becomes exhausted in a portable device (see Sklovsky, Abstract).

Regarding claim 43, Abreu teaches claims 37 and 41. Abreu does not specifically disclose the first system list is a subset of the second system list and the third system list, and the second system list is a subset of the third system list.

Sklovsky teaches the first system list is a subset of the second system list and the third system list, and the second system list is a subset of the third system list (see [0029]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Sklovsky into the system of Abreu in order to prevent problem that can occur when power becomes exhausted in a portable device (see Sklovsky, Abstract).

Art Unit: 2617

9. Claims 45-51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Abreu et al (US 5,754,956) in view of Sasaki et al (US 5,539,858).

Regarding claims 45-48, Abreu teaches claim 37. Abreu does not specifically disclose the step of comparing includes setting a mobility flag to true if a Pseudo Noise of the system is unknown.

Sasaki teaches the step of comparing includes setting a mobility flag to true if a Pseudo Noise of the system is unknown (see column 7, lines 28-43).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Sasaki into the system of Abreu so that discomfort is avoid in hearing the reproduced voice (see Sasaki, Abstract).

Regarding claim 49, Abreu teaches the step of comparing includes

(i) incrementing a loop counter when the mobility flag is false (see column 8, lines 31-47 and column 9, lines 26-58),

(ii) comparing the loop counter value to the maximum loop counter value (see column 8, lines 31-47 and column 9, lines 26-58), and,

(iii) switching the mobile device to one of the second and third level deep sleep when the loop counter value equals the maximum loop counter value (see column 8, lines 31-47 and column 9, lines 26-58).

Regarding claim 50, Abreu teaches step (iii) includes switching the mobile device to the second level deep sleep mode when the mobile device is in the first level deep sleep mode (see column 8, lines 31-47).

Regarding claim 51, Abreu teaches step (iii) includes switching the mobile device to the third level deep sleep mode when the mobile device is in the second level deep sleep mode (see column 8, lines 31-47).

Allowable Subject Matter

10. Claims 27, 28 and 32-34 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Conclusion

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nghi H. Ly whose telephone number is (571) 272-7911. The examiner can normally be reached on 8:30 am-5:30 pm Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marsha Banks-Harold can be reached on (571) 272-7905. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

Application/Control Number: 10/533,958

Page 11

Art Unit: 2617

you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Nghi H. Ly

A handwritten signature in black ink, appearing to be 'Nghi H. Ly', written in a cursive style.